

ABSTRACT OF THE DISCLOSURE

A chemical-reaction inducing means is provided in an exhaust line connecting a processing space for subjecting a substrate or a film to plasma processing 5 to an exhaust means, and at least either an unreacted gas or byproduct exhausted from the processing space are caused to chemically react without allowing plasma in the processing space to reach the chemical-reaction inducing means, thereby improving the processing 10 ability of the chemical-reaction inducing means to process the unreacted gas or byproduct.